

## CLAIMS

What is claimed is:

1. A method, comprising:

reading meta data to assemble components at run time to create an element; and  
executing a container application, the container application interacting with the  
element with respect to a behavior contained by the element.

2. The method of claim 1, further comprising:

using a pattern in the meta data for linking between elements;  
using a pattern in the meta data for communications between elements; and  
creating an element class catalog from a template.

3. The method of claim 1, further comprising:

assigning values for a setting in the element;  
assigning values for data in the element; and  
saving information about the element to a computer readable medium.

4. An apparatus, comprising:

an application creator to assemble software components at run time into a container  
application, the container application to support interface inheritance and implementation  
inheritance from an existing software component.

FOR FILING

5. The apparatus of claim 4, wherein the container application comprises:
  - an element container;
  - a catalog of available interfaces and implementations;
  - element coordination logic; and
  - an element.
6. The apparatus of claim 5, wherein the element is one in a group consisting of a representation of a specific object, or a logically distinct set of functions used by the container application.
7. The apparatus of claim 4, wherein implementation inheritance is one in a group consisting of reusing code from the existing software component, selectively overriding an individual function defined by the existing software component, adding a new function to the existing software component that is automatically propagated to a derived software component, or composing new elements from existing behaviors.
8. The apparatus of claim 4, wherein the container application comprises a simulation.
9. The apparatus of claim 4, wherein the container application comprises a simulation of a communications system.
10. The apparatus of claim 4, wherein the container application comprises a simulation of a wireless network.

11. The apparatus of claim 4, further comprising the container application to support an addition of a new function to the container application without having to recompile the container application.

12. The apparatus of claim 4, further comprising the application creator to enable creation of an application without the program having a predetermined functionality.

13. The apparatus of claim 5, wherein the element further comprises the element having an attribute and a behavior.

14. The apparatus of claim 13 wherein the attribute is one in a group consisting of data, part of a definition of the element, or a description of a state of the element.

15. The apparatus of claim 13, wherein the behavior comprises an implemented function.

16. The apparatus of claim 13, further comprising the behavior having an interface defining a type of behavior.

17. The apparatus of claim 13, further comprising the behavior being a service.

18. A method, comprising:

assembling software components at run time into a container application to make a coherent application;

selecting an interface and an implementation from a catalog; and

using the interface and the implementation with the container application.

19. The method of claim 18, further comprising:

reusing code from an existing software component.

20. The method of claim 18, further comprising:

selectively overriding a function inherited from an existing software component.

21. The method of claim 18, further comprises:

composing new elements from existing behaviors.

22. The method of claim 18, further comprising:

automatically propagating to a derived class a new function added to a base class.

23. The method of claim 18, wherein the container application interacts with the software component with respect to a behavior contained by the software component.

24. The method of claim 18, wherein the container application supports a file irrespective of a version of the container application.

25. The method of claim 18, wherein the application comprises a simulation.

26. An apparatus, comprising:

a computer readable media; and

a program embedded on the computer readable media and written in component software language, the program to provide instructions, which when executed by a machine, cause the machine to assemble an arbitrary collection of elements at run time into an application, the application uses an arbitrary assembly of interfaces and implementations, and the application supports implementation inheritance and interface inheritance from a class.

27. The apparatus of claim 26, wherein the application interacts with the element with respect to a behavior contained by the element.

28. The apparatus of claim 26, wherein the application comprises a simulation.

29. A apparatus, comprising:

means for assembling software components at run time into a container application to make a coherent application;

means for selecting an interface and an implementation from a catalog; and

means for using the interface and the implementation with the container application.

30. The apparatus of claim 29, further comprising:

means for reusing code from an existing software component.

31. The apparatus of claim 29, further comprising:

means for selectively overriding a function inherited from an existing software component.

FILED 2023-09-08